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Application Number [ ] Submit

IDS Flag Clearance for Application 10772370

IDS Information

Content	Mailroom Date	Entry Number	IDS Review	Last Modified	Reviewer
WIDS	2004-05-17	18	Y ☑	2007-06-22 08:09:47.0	CNguyen1
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L1: Entry 1 of 10 File: PGPB Nov 25, 2004

PGPUB-DOCUMENT-NUMBER: 20040231634
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040231634 A1

TITLE: Control system for cylinder cut-off internal combustion engine

PUBLICATION-DATE: November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sen, Naoto	Saitama		JP
Okada, Tadayoshi	Saitama		JP
Sugiyama, Akira	Saitama		JP
Nishida, Kenichi	Saitama		JP
Tomokuni, Yasuhiko	Saitama		JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
HONDA MOTOR CO., LTD.				03

APPL-NO: 10/844033 [PALM]
DATE FILED: May 11, 2004

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	JP2003-138720	2003JP-JP2003-138720	May 16, 2003

INT-CL-PUBLISHED: [07] F02B 75/16

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	F02 D 17/00	20060101
CIPS	F02 D 17/02	20060101
CIPS	F02 D 41/02	20060101
CIPS	F02 D 41/36	20060101
CIPS	F02 D 13/06	20060101
CIPS	F02 D 41/32	20060101

US-CL-PUBLISHED: 123/198.00F
US-CL-CURRENT: 123/198F

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

In a control system for an internal combustion engine having a plurality of cylinders whose operation of the engine can be switched between full-cylinder operation during which all of the cylinders are operative and cut-off-cylinder operation during which some of the cylinders are non-operative, and running control, i.e., either cruise control during which the vehicle is controlled to run at a desired vehicle velocity or preceding vehicle follow-up control during which the vehicle is controlled to run at a desired vehicle velocity to maintain a desired inter-vehicle distance from a preceding vehicle, is performed in response to an instruction of an operator, it is judged whether a velocity error between a detected vehicle velocity and the desired vehicle velocity and load of the engine are equal to or smaller than corresponding threshold values. If the result is affirmative when the running control is in progress, it is determined that running condition of the vehicle is stable and the engine operation is switched to the cut-off-cylinder operation, thereby preventing a control hunting from happening, while ensuring to improve fuel consumption by utilizing the cut-off-cylinder operation as much as possible.

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L1: Entry 2 of 10 File: PGPB Aug 26, 2004

PGPUB-DOCUMENT-NUMBER: 20040163866
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040163866 A1

TITLE: Control system for cylinder cut-off internal combustion engine

PUBLICATION-DATE: August 26, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sen, Naoto	Wako-shi		JP
Okada, Tadayoshi	Wako-shi		JP
Sugiyama, Akira	Wako-shi		JP
Nishida, Kenichi	Wako-shi		JP
Tomokuni, Yasuhiko	Wako-shi		JP
Ishiyama, Mahito	Wako-shi		JP
Yamashita, Kazuo	Wako-shi		JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
HONDA MOTOR CO., LTD.				03

APPL-NO: 10/781680 [PALM]
DATE FILED: February 20, 2004

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	JP2003-049877	2003JP-JP2003-049877	February 26, 2003

INT-CL-PUBLISHED: [07] B60K 31/04

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	B60 K 31/02	20060101
CIPS	F02 D 13/06	20060101
CIPS	B60 K 31/04	20060101
CIPS	F02 D 13/04	20060101
CIPS	F02 D 17/00	20060101
CIPS	F02 D 41/12	20060101
CIPS	F02 D 41/32	20060101
CIPS	F02 D 17/02	20060101
CIPS	F02 D 41/36	20060101

US-CL-PUBLISHED: 180/179
US-CL-CURRENT: 180/179

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

In a control system for an internal combustion engine having a plurality of cylinders and mounted on a vehicle, in which the engine operation is switched based on the throttle opening between a full-cylinder operation in which all of the cylinders are operative and a cut-off cylinder operation in which some of the cylinders are inoperative, and a running control including at least a cruise control in which the vehicle runs at a desired vehicle velocity is conducted, the engine operation is switched to the full-cylinder operation when it is determined that deceleration is required in the running control, so as to increase pumping loss (engine loss). With this, it becomes possible to generate the deceleration sufficiently as desired, when, for example, the vehicle descends a downhill.

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L1: Entry 4 of 10 File: USPT Jan 24, 2006

US-PAT-NO: 6988481
DOCUMENT-IDENTIFIER: US 6988481 B2

TITLE: Control system for cylinder cut-off internal combustion engine

DATE-ISSUED: January 24, 2006

PRIOR-PUBLICATION:

DOC-ID	DATE
US 20040231634 A1	November 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sen; Naoto	Wako			JP
Okada; Tadayoshi	Wako			JP
Sugiyama; Akira	Wako			JP
Nishida; Kenichi	Wako			JP
Tomokuni; Yasuhiko	Wako			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Honda Motor Co., Ltd.	Tokyo			JP	03

APPL-NO: 10/844033 [PALM]
DATE FILED: May 11, 2004

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	2003-138720	May 16, 2003

INT-CL-ISSUED:

TYPE	IPC	DATE	IPC-OLD
IPCP	F02D17/00	20060101	F02D017/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	F02 D 17/00	20060101

US-CL-ISSUED: 123/198F; 123/349
US-CL-CURRENT: 123/198F; 123/349

FIELD-OF-CLASSIFICATION-SEARCH: 123/198F, 123/338.19, 123/349, 123/350, 123/351,

123/352, 123/359, 123/364, 123/394, 123/319, 123/339.1, 123/339.16
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4742462	May 1988	Fujimori et al.	701/111
☐	5267541	December 1993	Taguchi et al.	123/198F
☐	6341594	January 2002	Linden	123/352
☐	6470851	October 2002	DeGroot et al.	123/323
☐	6484686	November 2002	Ordanic	123/198F
☐	6619258	September 2003	McKay et al.	123/350
☐	6655353	December 2003	Rayl	123/436
☐	2003/0131820	July 2003	McKay et al.	123/198F
☐	2005/0065709	March 2005	Cullen	701/112

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
54-133222	October 1979	JP	
05-071634	March 1993	JP	
09-290665	November 1997	JP	
10-103097	April 1998	JP	

ART-UNIT: 3747

PRIMARY-EXAMINER: Yuen; Henry C.

ASSISTANT-EXAMINER: Benton; Jason

ATTY-AGENT-FIRM: O'Melveny & Myers LLP

ABSTRACT:

In a control system for an internal combustion engine having a plurality of cylinders whose operation of the engine can be switched between full-cylinder operation during which all of the cylinders are operative and cut-off-cylinder operation during which some of the cylinders are non-operative, and running control, i.e., either cruise control during which the vehicle is controlled to run at a desired vehicle velocity or preceding vehicle follow-up control during which the vehicle is controlled to run at a desired vehicle velocity to maintain a desired inter-vehicle distance from a preceding vehicle, is performed in response

to an instruction of an operator, it is judged whether a velocity error between a detected vehicle velocity and the desired vehicle velocity and load of the engine are equal to or smaller than corresponding threshold values. If the result is affirmative when the running control is in progress, it is determined that running condition of the vehicle is stable and the engine operation is switched to the cut-off-cylinder operation, thereby preventing a control hunting from happening, while ensuring to improve fuel consumption by utilizing the cut-off-cylinder operation as much as possible.

22 Claims, 7 Drawing figures

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L2: Entry 1 of 1 File: PGPB Aug 12, 2004

PGPUB-DOCUMENT-NUMBER: 20040158383
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040158383 A1

TITLE: Control system for cylinder cut-off internal combustion engine

PUBLICATION-DATE: August 12, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sen, Naoto	Wako-shi		JP
Okada, Tadayoshi	Wako-shi		JP
Sugiyama, Akira	Wako-shi		JP
Nishida, Kenichi	Wako-shi		JP
Tomokuni, Yasuhiko	Wako-shi		JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
HONDA MOTOR CO., LTD.				03

APPL-NO: 10/772370 [PALM]
DATE FILED: February 6, 2004

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	JP2003-030812	2003JP-JP2003-030812	February 7, 2003
JP	JP2003-136954	2003JP-JP2003-136954	May 15, 2003

INT-CL-PUBLISHED: [07] B60K 31/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	F02 D 41/02	20060101
CIPS	F02 D 41/32	20060101
CIPS	F02 D 41/36	20060101
CIPS	B60 K 31/00	20060101

US-CL-PUBLISHED: 701/096; 701/110
US-CL-CURRENT: 701/96; 701/110

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

In a control system for an internal combustion engine having a plurality of cylinders and mounted on a vehicle, in which the engine operation is switched based on the throttle opening between a full-cylinder operation in which all of the cylinders are operative and a cut-off cylinder operation in which some of the cylinders are inoperative, and a running control including a cruise control in which the vehicle runs at a desired vehicle velocity and a preceding vehicle follow-up control in which the vehicle runs at a desired vehicle velocity to maintain a desired inter-vehicle distance from a preceding vehicle are conducted. In the system, an acceleration suppression control is conducted if the engine operation is switched from the cut-off cylinder operation to the full-cylinder operation when the running control is in progress. With this, sharp or drastic acceleration accompanying torque fluctuation is effectively avoided, when the engine operation is switched to the full-cylinder operation.

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